

I claim::

1. ~~A satellite broadcasting system comprising:~~

~~a satellite dish coupled to a low noise block converter; and~~

~~said low noise block converter is coupled to a first means of converting~~

5 ~~vertical polarization signals and horizontal polarization signals or left hand
circular polarization signals and right hand circular polarization signals from said
satellite and transmitting simultaneously via a single coaxial cable for enabling
two different frequencies and polarities to be transmitted simultaneously via said
single coaxial cable.~~

10 ~~2. A satellite broadcasting system as in claim 1 further comprising a
second means is coupled to the first means;~~

~~said second means converts said vertical polarization signals and said
horizontal polarization signals or said left hand circular polarization signals and
said right hand circular polarization signals from said first means to frequencies
15 for a source;~~

~~a satellite receiver is coupled to the second means; and~~

~~said source is coupled to the satellite receiver.~~

~~3. A satellite broadcasting system as in claim 2 wherein a power source is
coupled to said first means and said power source powers said first means.~~

20 ~~4. A satellite broadcasting system as in claim 2 wherein said second
means provides for said signals to be converted separately and independently to
said satellite receiver by a transmitting means.~~

~~5. A satellite broadcasting system as in claim 2 wherein said second
means provides for a transmitting means for said signals to be selectively
25 converted to said satellite receiver via a first cable coupled to said second
means.~~

~~6. A satellite broadcasting system as in claim 5 wherein said transmitting
means further includes a polarity switch for permitting said signals to be
selectively converted to said satellite receiver.~~

30 ~~7. A satellite broadcasting system as in claim 2 wherein said first means
includes a first converting system for converting said signals of a first direction to
a desired first frequency and polarization and a second converting system for~~

converting said signals of a second direction to a desired second frequency and polarization.

8. A satellite broadcasting system as in claim 7 wherein said first converting system includes a first down converter which is coupled to an amplifier and said second converting system includes an up converted coupled to a second down converter and a joining means is coupled to said amplifier and said second down converter. T

9. A satellite broadcasting system as in claim 8 wherein said joining means includes a four way splitter.

10. A satellite broadcasting system as in claim 9 wherein a phase lock loop transmitter is coupled said four way splitter.

11. A satellite broadcasting system as in claim 4 wherein said second means includes a splitting means to split and divide said signals from said single coaxial cable to enable said signals to be transmitted to a first converting system for converting said signals of a first direction to a desired first frequency and polarization for said satellite receiver and a second converting system for converting said signals of a second direction to a desired second frequency and polarization for said satellite receiver, and said first converting system and said second converting system provide for said transmitting means.

12. A satellite broadcasting system as in claim 11 wherein said first converting system includes a first up converter which is coupled to said splitting means and said first down converter is coupled to a first down converter, said first down converter is coupled to said satellite receiver via a first conduit said second converting system includes a second up converter coupled to said splitting means, and said second up converter is coupled to said satellite receiver via a second conduit.

13. A satellite broadcasting system as in claim 12 wherein said splitting means includes a four way splitter.

14. A satellite broadcasting system as in claim 13 wherein a phase lock loop receiver is coupled said four way splitter.

15. A satellite broadcasting system as in claim 6 wherein said second means includes a splitting means to split and divide said signals from said single coaxial cable to enable said signal to be transmitted to a first converting system

for converting said signals of a first direction to a desired first frequency and polarization for said satellite receiver and a second converting system for converting said signals of a second direction to a desired second frequency and polarization for said satellite receiver, and said first converting system and said second converting system provide for said transmitting means.

16. A satellite broadcasting system as in claim 15 wherein said first converting system includes a first up converter which is coupled to said splitting means and said first up converter is coupled to a first down converter, said first down converter is coupled to a joining means, said second converting system includes a second up converter coupled to said splitting means, and said second up converter is coupled to said joining means, a polarity switch is coupled to said first down converter and said second up converter, and said polarity switch is coupled to said first cable which is coupled to said satellite receiver.

17. A satellite broadcasting system as in claim 16 wherein said splitting means and said joining means each include a four way splitter, and a phase lock loop receiver is coupled to said splitting means.

18. A satellite broadcasting system as in claim 8 wherein said second means includes a splitting means to split and divide said signals from said single coaxial cable to enable said signal to be transmitted to a third converting system for converting said signals of said first direction and a fourth converting system for converting said signals of said second direction.

19. A satellite broadcasting system as in claim 18 wherein said third converting system includes a second up converter which is coupled to said splitting means and said second up converter is coupled to a third down converter, said third down converter is coupled to said satellite receiver via a first conduit, said fourth converting system includes a third up converter coupled to said splitting means, and said third up converter is coupled to said satellite receiver via a second conduit.

20. A satellite broadcasting system as in claim 8 wherein said second means includes a splitting means to split and divide said signals from said single coaxial to enable said signals to be transmitted to a third converting system for converting said signals of said first direction to a desired first frequency and polarization for said satellite receiver and a fourth converting system for

~~converting said signals of said second direction to a desired second frequency and polarization for said satellite receiver.~~

~~21. A satellite broadcasting system as in claim 20 wherein said third converting system includes a second up converter which is coupled to said splitting means and said second up converter is coupled to a third down converter, said third down converter is coupled to a second joining means, said fourth converting system includes a third up converter coupled to said splitting means, and said third up converter is coupled to said second joining means, a polarity switch is coupled to said third down converter and said third up converter, and said polarity switch is further coupled to a conduit which is coupled to said satellite receiver, and said second joining means is coupled to said conduit.~~

22. A method of distributing satellite signals received by a satellite antenna via a coaxial cable to a satellite receiver coupled to an end of said coaxial cable, said coaxial cable also having a further end, said method comprising:

receiving, with a satellite antenna, first signals having a first polarization and second signals having a second polarization;

frequency converting at least said first received signals to a different frequency band;

simultaneously applying said frequency-converted first signals and said second signals to the coaxial cable;

simultaneously communicating said frequency-converted first signals and said second signals through the cable;

recovering the frequency-converted first signals and the second signals from the cable;

further frequency converting said recovered first signals to a frequency range the satellite receiver can receive; and

switching, under control of said satellite receiver, between said further frequency-converted first signals and said second signals for application to said satellite receiver.

23. The method of claim 22 wherein said switching step comprising operating an electrical switch.

24. A method of distributing broadcast signals received from an artificial satellite comprising:

receiving first polarized signals and second polarized signals from the artificial satellite;

frequency converting at least one of said first signals and said second signals to different frequencies;

5 after processing by the frequency converting step, applying said first and second signals, to a coaxial cable such that the same coaxial cable carries both said first signals and said second signals simultaneously;

recovering said first signals and said second signals from the coaxial cable;
and

10 selecting between said first signals and said second signals for application to a satellite receiver.

25. The method as in claim 24 wherein said selecting step comprises electrically switching between said first signals and said second signals for application to said satellite receiver.

15 26. The method of claim 24 wherein said satellite receiver alternately uses first polarity type signals or second polarity type signals at a time, and said selecting step selects only first polarity type signals or second polarity type signals at a time for application to said satellite receiver.

27. The method of claim 24 wherein said satellite receiver is coupled via a wire to an input source, and said selecting step selects between said first signals and said second signals for application to said wire.

28. The method of claim 24 wherein said frequency converting step comprises a down conversion.

25 29. The method of claim 24 wherein the frequency converting step comprises an up conversion.

30. The method of claim 24 wherein the frequency converting step comprises a down conversion followed by an up conversion.

31. The method of claim 24 further including providing further frequency converting said at least one of said first signals and second signals for application to
30 said satellite receiver.

32. A satellite broadcasting system comprising:

a satellite dish;

a low-noise block converter coupled to the satellite dish;

a head-in processor that receives, from the low-noise block converter, both vertical polarization type satellite signals and horizontal polarization type satellite signals and applies both said vertical polarization type satellite signals and said horizontal polarization type satellite signals simultaneously to the same distribution
5 cable; and

a head-out processor adapted for, in use, being coupled to a satellite receiver of the type that alternately receives vertical polarization type satellite signals and horizontal polarization type satellite signals, said head-out processor being coupled to said distribution cable, said head-out processor selecting
10 between said vertical polarization type satellite signals and said horizontal polarization type satellite signals being carried by said distribution cable for application to said satellite receiver.